

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	John L. White	)	Examiner:	Truong, Thanh K
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Serial No.:	10/667,176	)	Art Unit:	3721
		)		
Filed:	09/17/2003	)	Attorneys Ref.:	P214414
		)		
Title:	Preloaded Drop Hammer For Driving	)		
	Piles	)		

**REMARKS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

The Applicant is responding to the Office Action mailed 09/12/2008. It is believed that no fee or charge is due at this time to maintain the application in full force and effect. However, if any such fee or charge is due, please charge this to Deposit Account No. 502099.

In the Office Action mailed on 09/12/2008, the Examiner rejected claims 1, 4, 6, 8, 9, 12, 13, 18, and 21 under 35 USC § 103(a) as being unpatentable over U.S. Pat. No. 4,421,180 to Fleishman et al. in view of U.S. Pat. Nos. 6,102,133 to Scheid et al. and 3,789,930 to Nishimura et al. The Applicant hereby amends the application in a manner that distinguishes the present invention from the cited combination; the Applicant thus respectfully requests withdrawal of the rejection under 35 USC § 103(a) on the basis that the cited combination fails to disclose, teach, or suggest the present invention as recited in amended claims 1, 13, and 18.

In particular, the Applicant has amended claims 1, 13, and 18 to specify that the ram member directly and rigidly impacts the helmet member to drive the pile and that compression of ambient air within the preload portion of the housing chamber opposes movement of the ram member towards the lower position.

The Applicant respectfully submits that the ram of the Fleishman reference does not directly and rigidly impact a helmet member as recited in amended claims 1, 13, and 18. In particular, the ram of the Fleishman reference impacts a strike cushion and thus resiliently, rather than rigidly, impacts the helmet member. The Fleishman reference thus prevents direct and rigid contact between a ram member and a helmet member as recited in claims 1, 13, and 18.

In addition, the Examiner acknowledges that the Fleishman reference does not recite a seal system as recited in the claims but cites the Scheid reference as providing such a seal system. However, the portion of the Scheid reference cited by the Examiner in the Office Action clearly states that the “hammering piston thereafter [is] allowed to fall freely onto the hammering member”. As stated in the amendments to claims 1, 13, and 18, the compression of the ambient air within the preload chamber opposes movement of the ram member, thus preventing the free fall situation described in the Scheid reference.

The combination of the compression of ambient air and the direct and rigid impact of the ram member onto the helmet member results in improved impact distribution over time as suggested in the curves of FIG. 2 of the drawings. In particular, curve 92a in FIG. 2 of the drawings illustrates a double-humped force record associated with a conventional, free-falling ram member. In contrast, curve 92a illustrates a smoother force distribution over time resulting from the compression force created by the systems and methods recited in claims 1, 13, and 18. This smoother force distribution reduces the magnitude of reflected tension stresses on the pile and thus reduces tension cracking in concrete piles.

The Applicant respectfully submits that the Fleishman and Schied references fail to recognize the problem described in FIG. 2 and further describe free-falling ram members that would not result in a force distribution curve such as the curve resulting from the systems and methods recited in claims 1, 13, and 18.

The Applicant respectfully submits that the combination of the Fleishman and Scheid references does not yield a prima facie case of obviousness under 35 USC i§ 103(a) and requests withdrawal of the rejection of claims 1, 13, and 18 based on this combination. Claims 4, 6, 8, 9, and 12 further define claim 1 and claim 21 further

defines claim 18, so claims 4, 6, 8, 9, 12, and 21 should also be in condition for allowance for at least the reasons set forth above.

Submitted herewith is a PDF document entitled P214414\_Claims\_2008-12-12 containing a marked up version of the claims illustrating the amendments to the claims submitted by this Response. The document submitted herewith contains the text of each pending claim, along with any amendments made hereby (illustrated using strikethrough and underlining) and the status of each pending claim.

Given the foregoing, the Applicant respectfully submits that claims 1, 4, 6, 8, 9, 12, 13, 18, and 21 are in condition for allowance, and such allowance is respectfully requested. If there is any matter which could be expedited by consultation with the Applicant's attorney, such would be welcome. The Applicant's attorney can normally be reached at the telephone number below.

Signed at Bellingham, County of Whatcom, State of Washington this 12th day of December, 2008.

Respectfully submitted,

John L. White

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